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Ref: #10CFR50.54

CPSES- 200402454
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October 28, 2004

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)
DOCKET NOS. 50-445 AND 50-446
REQUEST FOR ADDITIONAL INFORMATION REGARDING
RESPONSE TO BULLETIN 2003-01

REF: Letter logged TXX-03130, dated August 8, 2003 from Mike Blevins
to the NRC

Gentlemen:

The NRC requested TXU Generation Company LP (TXU Power) to provide information regarding the emergency core cooling system (ECCS) and containment spray system (CSS) recirculation functions with respect to the potentially adverse post-accident debris blockage effects per Bulletin 2003-01. Per the above referenced letter, TXU Power provided the requested response for Comanche Peak Steam Electric Station (CPSES), Units 1 and 2. On September 13, 2004, the NRC staff requested TXU Power to provide additional information regarding the response to the subject Bulletin. The information requested by the NRC staff is provided in the attachment to this letter.

A103

This communication contains the following new licensing basis commitments regarding CPSES Units 1 and 2.

<u>Tracking Number</u>	<u>Commitment</u>
27325	COAs 1 (early spray termination), 2 (manual realignment for single train operation with a standby train aligned to the RWST), 3 (termination of one train of ECCS after switchover to recirculation), and 6 (inject more than one RWST volume) were found to require substantial engineering analysis and regulatory required reviews prior to implementation. These are being evaluated as a long term GSI-191 activity (a schedule consistent with Generic Letter 2004-02 resolution).
27326	The door to the incore instrumentation guide tube room on both units has been similarly redesigned to allow the free flow of water and transportable LOCA debris from the annulus to the incore instrumentation guide tube room and reactor cavity. The door modifications are being implemented at power and are scheduled to be complete before the end of 2004.
27327	Radiation barriers over the floor opening around the incore instrumentation guide tubes have also been redesigned to maximize the flow area from Elevation 808 to the reactor cavity. Unit 2 is scheduled to be completed in the 2005 spring outage (2RF08).

Should you have any questions, please contact Jimmy Seawright at
(254) 897-0140.

I state under penalty of perjury that the foregoing is true and correct.

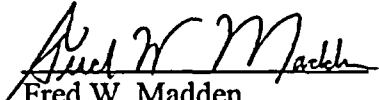
Executed on October 28, 2004.

Sincerely,

TXU Generation Company LP

By: TXU Generation Management Company LLC
Its General Partner

Mike Blevins

By: 
Fred W. Madden
Director, Regulatory Affairs

JDS
Attachment

c - B. S. Mallett, Region IV
W. D. Johnson, Region IV
M. C. Thadani, NRR
Resident Inspectors, CPSES

Response to NRC Request for Additional Information

NRC Question 1:

On page 8 of Attachment 1 of your Bulletin 2003-01 response you state "CPSES will consider changes once the WOG's [Westinghouse Owners Group] evaluation has provide more information defining exactly what procedural changes reduce risk while improving sump performance." The Westinghouse Owners Group (WOG) has developed operational guidance in response to Bulletin 2003-01 for Westinghouse and CE type pressurized water reactor (PWRs). Please provide a discussion of your plans to consider implementing this new WOG guidance. Include a discussion of the WOG recommended compensatory measures that have been or will be implemented at your plant, and the evaluations or analyses performed to determine which of the WOG recommended changes are acceptable at your plant. Provide technical justification for those WOG recommended compensatory measures not being implemented by your plant. Also include a detailed discussion of the procedures being modified, the operator training being implemented, and your schedule for implementing these compensatory measures.

TXU Power Response:

WCAP-16204, "Evaluation of Potential ERG and EPG Changes to Address NRC Bulletin 2003-01 Recommendation (PA-SEE-0085)", Revision 1 (March 2004) was reviewed in response to the NRC Bulletin. The evaluation of the eleven WOG Candidate Operator Actions (COAs) in WCAP-16204 was separated into 3 categories. Those to be implemented as compensatory actions in the short term under the Bulletin actions, those to be evaluated in the long term under GSI-191 long term resolution (a schedule consistent with resolution of Generic Letter 2004-02), and those rejected from further consideration.

COAs 1 (early spray termination), 2 (manual realignment for single train operation with a standby train aligned to the RWST), 3 (termination of one train of ECCS after switchover to recirculation), and 6 (inject more than one RWST volume) were found to require substantial engineering analysis and regulatory required reviews prior to implementation. These are being evaluated as a long term GSI-191 activity. The status of that evaluation is described as follows:

COA 1 [A1a-W] - This candidate action involves stopping one containment spray train prior to switchover if both trains are operating. This introduces the potential for total interruption of spray flow. Implementation of this step requires demonstration that adequate time is available to restart the idle train. CPSES does not have water/time margin in the RWST switchover to add any steps as would be required. This COA would be a change to the procedures as described in the FSAR. In accordance with WCAP-16204, Appendix A, this step was not implemented.

COA 1 [A1b] - This candidate action involves stopping both containment spray trains if containment fan coolers are operating and adequately controlling pressure and temperature. CPSES does not have safety grade fan coolers. The non -safety fan coolers are not sized for accident heat loads. This COA does not apply to CPSES.

COA 2 [A2] - This candidate action involves manually realigning one safety injection train to sump recirculation prior to automatic switchover. The intent is to start recirculation while usable inventory remains available in the RWST. This would require analysis of sump levels and temperatures. It would be adverse to NPSH_a (which would be lowered), to heat loads on cooling water system (which would be increased), and on transport of debris to the screens (which would be increased). CPSES does not consider this COA viable.

COA 3 [A3-W] - This candidate action involves stopping one train of safety injection after recirculation alignment. This introduces the potential for total interruption of core cooling. Implementation of this step requires demonstration that adequate time is available to restart the idle train. CPSES does not have water/time margin in the RWST switchover to add any steps during switchover as would be required to achieve the perceived benefits. This change would result in all the debris loading being carried by one screen when it could be distributed between two. This COA was deemed to need further study before a decision on implementation could be made.

COA 6 [A6] - This candidate action involves procedurally directed injection of more than one RWST volume from a refilled RWST or by bypassing the RWST. Although this could be beneficial, this would require major procedural changes and technical reviews. Note that COA 5 covers this as an available option depending on the circumstances. COA 6 was deemed to need further study before a decision on implementation could be made.

Note: The above COAs require changes to the operation of ECCS and containment spray as described in the FSAR as updated. The CPSES switchover from injection to recirculation is a semi-automatic process. Therefore, operator response time and consideration of various potential single failures is required to support and justify the ERGs. Although these COAs have merit, they are in direct conflict and contrary to the current licensing basis and design. In order to implement these for CPSES, significant analyses and a License Amendment would likely be required to change technical specifications. A variation of COAs 1, 3, and 6 is being considered and is described under the response to NRC Question 2 below.

COAs 4 (CE Plants only), 10 (CE Plants only), and 11 (Ice Condenser Plants only) were found to be not applicable to CPSES (Westinghouse PWR, large dry containment) and rejected from further consideration.

COA 7 was noted by WCAP-16204 to be an existing feature. No action was required.

COAs 5 (procedurally directed refill of the RWST), 8 (provide guidance on symptoms and identification of containment sump blockage), and 9 (develop contingency actions to be taken in response to sump blockage) were found to be applicable and were implemented in June 2004 as compensatory actions in response to the NRC Bulletin. The procedure changes and training were as follows:

COA 5 - EOS-1.3A for Unit 1 and EOS-1.3B for Unit 2 were changed to add a step to begin RWST refill immediately after completion of switchover.

COA 8 and COA 9 - EOS-1.3A and ECA-1.1A for Unit 1 and EOS-1.3B and ECA-1.1B for Unit 2 were changed to add a CAUTION, to check for indications of screen blockage with instructions to transition to the appropriate guideline. This Caution applies anytime during and after transfer to recirculation. The intent of the continuous action step is met by the CAUTION. ECA-1.1A and ECA-1.1B and the Plant Staff Evaluation Document were changed to include sump blockage guidelines based on COAs 8 and 9 in the WCAP.

NRC Question 2:

NRC Bulletin 2003-01 provides possible interim compensatory measures licensees could consider to reduce risks associated with sump clogging. In addition to those compensatory measures listed in Bulletin 2003-01, licensees may also consider implementing unique or plant-specific compensatory measures, as applicable. Please discuss any possible unique or plant-specific compensatory measures you considered for implementation at your plant. Include a basis for rejecting any of these additional considered measures.

TXU Power Response:

In addition to the possible interim compensatory measures suggested in the Bulletin and described in the previous CPSES response in TXX-03130 dated August 8, 2003, radiation barrier modifications have been initiated which enhance the drain paths to the containment annulus and reactor cavity. The wire mesh door on each loop room on both units (4 per unit) has been redesigned to replace the wire mesh with steel bars spaced to maximize free area. This will allow the free flow of water and transportable LOCA debris from the reactor coolant loop rooms to the annulus where the emergency sumps are located. The door to the incore instrumentation guide tube room on both units has been similarly redesigned to allow the free flow of water and transportable LOCA debris from the annulus to the incore instrumentation guide tube room and

reactor cavity. The door modifications are being implemented at power and are scheduled to be complete before the end of 2004. Radiation barriers over the floor opening around the incore instrumentation guide tubes have also been redesigned to maximize the flow area from Elevation 808 to the reactor cavity. Unit 1 was completed in the 2004 spring outage (1RF10). Unit 2 is scheduled to be completed in the 2005 spring outage (2RF08). The intent of these modifications is to optimize the early transport of LOCA generated debris from the compartments at Elevation 812'-0" to the annulus and, from there, to the inactive sump below the reactor vessel. This will also ensure that the doors do not become hold up or choke points that could reduce flow to the sumps.

A CPSES variation derived from COAs 1, 3 and 6 is being evaluated. The RWST Low Low switchover setpoint in Technical Specification 3.3.2 would be lowered to increase the level in containment prior to ECCS switchover to recirculation. This would allow more time to assess if both trains of spray are operating and stop one train as in COA 1. Both trains of ECCS would be realigned to the sump on RWST Low Low to ensure continuation of core cooling; however, the SI termination criteria in COA 3 would be added to the procedures after successful switchover. In lieu of spray switchover with running pumps, containment spray would be run to RWST empty and stopped. Both trains of spray would be realigned to the sump but only one would be re-started leaving one in standby while the RWST is being refilled. Once the RWST is adequately refilled, additional water would be pumped into containment via the standby spray pumps or by realignment of the Charging Pumps (high head SI) as in COA 6. The intent of this hybrid COA is to maximize flood levels (NPSH_a) at the point of each switchover, to minimize flow rates in the annulus after switchover, and to increase the water level in the annulus to fully submerge the sump screens. If this COA is selected, it will require supporting analyses and a change to the Technical Specifications.